

**INPUT SET: S32807.raw**

**This Raw Listing contains the General Information Section and up to the first 5 pages.**

## **SEQUENCE LISTING**

**ENTERED**

**RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/060,294**

DATE: 08/06/1999  
TIME: 11:54:14

**INPUT SET: S32807.raw**

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47
48      (i) SEQUENCE CHARACTERISTICS:
49          (A) LENGTH: 477 base pairs
50          (B) TYPE: nucleic acid
51          (C) STRANDEDNESS: double
52          (D) TOPOLOGY: linear
53
54      (ii) MOLECULE TYPE: cDNA
55
56      (iii) HYPOTHETICAL: NO
57
58      (iv) ANTI-SENSE: NO
59
60      (vi) ORIGINAL SOURCE:
61          (A) ORGANISM: Homo sapiens
62
63      (ix) FEATURE:
64          (A) NAME/KEY: CDS
65          (B) LOCATION: 1..477
66          (C) IDENTIFICATION METHOD: experimental
67          (D) OTHER INFORMATION: /codon_start= 1
68              /function= "Antigen"
69              /product= "TNF-alpha analog"
70              /evidence= EXPERIMENTAL
71              /gene= "tnfP2-1"
72              /standard_name= "TNF2-1"
73
74      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
75
76      ATG GTC AGA TCA TCT TCT CGA ACC CCG AGT CAG TAC ATT AAA GCC AAT      48
77      Met Val Arg Ser Ser Ser Arg Thr Pro Ser Gln Tyr Ile Lys Ala Asn
78          1           5           10          15
79
80      TCT AAA TTC ATC GGT ATA ACT GAG CTG CAG CTC CAG TGG CTG AAC CGC      96
81      Ser Lys Phe Ile Gly Ile Thr Glu Leu Gln Leu Gln Trp Leu Asn Arg
82          20          25           30
83
84      CGG GCC AAT GCC CTC CTG GCC AAT GGC GTG GAG CTG AGA GAT AAC CAG      144
85      Arg Ala Asn Ala Leu Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln
86          35          40           45
87
88      CTG GTG GTG CCA TCA GAG GGC CTG TAC CTC ATC TAC TCC CAG GTC CTC      192
89      Leu Val Val Pro Ser Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu
90          50          55           60
91
92      TTC AAG GGC CAA GGC TGC CCC TCC ACC CAT GTG CTC CTC ACC CAC ACC      240
93      Phe Lys Gly Gln Gly Cys Pro Ser Thr His Val Leu Leu Thr His Thr
94          65          70           75           80
95
96      ATC AGC CGC ATC GCC GTC TCC TAC CAG ACC AAG GTC AAC CTC CTC TCT      288
97      Ile Ser Arg Ile Ala Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser
98          85          90           95
99

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RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/060,294DATE: 08/06/1999  
TIME: 11:54:15

INPUT SET: S32807.raw

100 GCC ATC AAG AGC CCC TGC CAG AGG GAG ACC CCA GAG GGG GCT GAG GCC 336  
101 Ala Ile Lys Ser Pro Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala  
102 100 105 110  
103  
104 AAG CCC TGG TAT GAG CCC ATC TAT CTG GGA GGG GTC TTC CAG CTG GAG 384  
105 Lys Pro Trp Tyr Glu Pro Ile Tyr Leu Gly Val Phe Gln Leu Glu  
106 115 120 125  
107  
108 AAG GGT GAC CGA CTC AGC GCT GAG ATC AAT CGG CCC GAC TAT CTC GAC 432  
109 Lys Gly Asp Arg Leu Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp  
110 130 135 140  
111  
112 TTT GCC GAG TCT GGG CAG GTC TAC TTT GGG ATC ATT GCC CTC TAG 477  
113 Phe Ala Glu Ser Gly Gln Val Tyr Phe Gly Ile Ile Ala Leu \*  
114 145 150 155  
115  
116  
117 (2) INFORMATION FOR SEQ ID NO: 2:  
118  
119 (i) SEQUENCE CHARACTERISTICS:  
120 (A) LENGTH: 158 amino acids  
121 (B) TYPE: amino acid  
122 (D) TOPOLOGY: linear  
123  
124 (ii) MOLECULE TYPE: protein  
125  
126 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:  
127  
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129 1 5 10 15  
130  
131 Ser Lys Phe Ile Gly Ile Thr Glu Leu Gln Leu Gln Trp Leu Asn Arg  
132 20 25 30  
133  
134 Arg Ala Asn Ala Leu Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln  
135 35 40 45  
136  
137 Leu Val Val Pro Ser Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu  
138 50 55 60  
139  
140 Phe Lys Gly Gln Gly Cys Pro Ser Thr His Val Leu Leu Thr His Thr  
141 65 70 75 80  
142  
143 Ile Ser Arg Ile Ala Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser  
144 85 90 95  
145  
146 Ala Ile Lys Ser Pro Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala  
147 100 105 110  
148  
149 Lys Pro Trp Tyr Glu Pro Ile Tyr Leu Gly Val Phe Gln Leu Glu  
150 115 120 125  
151  
152 Lys Gly Asp Arg Leu Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp

**RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/060,294**

DATE: 08/06/1999  
TIME: 11:54:15

**INPUT SET: S32807.raw**

153	130	135	140	
154	Phe Ala Glu Ser Gly Gln Val Tyr Phe Gly Ile Ile Ala Leu			
155	145	150	155	
156				
157				
158				
159	(2) INFORMATION FOR SEQ ID NO: 3:			
160				
161	(i) SEQUENCE CHARACTERISTICS:			
162	(A) LENGTH: 477 base pairs			
163	(B) TYPE: nucleic acid			
164	(C) STRANDEDNESS: double			
165	(D) TOPOLOGY: linear			
166				
167	(ii) MOLECULE TYPE: DNA (genomic)			
168				
169	(iii) HYPOTHETICAL: NO			
170				
171	(iv) ANTI-SENSE: NO			
172				
173	(vi) ORIGINAL SOURCE:			
174	(A) ORGANISM: Homo sapiens			
175				
176	(ix) FEATURE:			
177	(A) NAME/KEY: CDS			
178	(B) LOCATION:1..477			
179	(D) OTHER INFORMATION:/codon_start= 1			
180	/function= "Antigen"			
181	/product= "TNF-alpha analog"			
182	/gene= "tnfP2-3"			
183	/standard_name= "TNF2-3"			
184				
185	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:			
186				
187	ATG GTC AGA TCA TCT TCT CGA ACC CCG AGT GAC AAG CCT GTA GCC CAT			48
188	Met Val Arg Ser Ser Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His			
189	160	165	170	175
190				
191	GTT GTA GCA AAC CCT CAA GCT GAG GGG CAG CTC CAG TGG CTG AAC CGC			96
192	Val Val Ala Asn Pro Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg			
193	180	185	190	
194				
195	CGG GCC AAT GCC CTC CTG GCC AAT GGC GTG GAG CTG AGA GAT AAC CAG			144
196	Arg Ala Asn Ala Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln			
197	195	200	205	
198				
199	CTG GTG GTG CCA TCA GAG GGC CTG TAC CTC ATC TAC TCC CAG GTC CTC			192
200	Leu Val Val Pro Ser Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu			
201	210	215	220	
202				
203	TTC CAG TAC ATA AAG GCC AAC TCC AAG TTT ATC GGC ATC ACC GAG CTC			240
204	Phe Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu Leu			
205	225	230	235	

**RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/060,294**DATE: 08/06/1999  
TIME: 11:54:15**INPUT SET: S32807.raw**

206  
207 ATC AGC CGC ATC GCC GTC TCC TAC CAG ACC AAG GTC AAC CTC CTC TCT 288  
208 Ile Ser Arg Ile Ala Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser  
209 240 245 250 255  
210  
211 GCC ATC AAG AGC CCC TGC CAG AGG GAG ACC CCA GAG GGG GCT GAG GCC 336  
212 Ala Ile Lys Ser Pro Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala  
213 260 265 270  
214  
215 AAG CCC TGG TAT GAG CCC ATC TAT CTG GGA GGG GTC TTC CAG CTG GAG 384  
216 Lys Pro Trp Tyr Glu Pro Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu  
217 275 280 285  
218  
219 AAG GGT GAC CGA CTC AGC GCT GAG ATC AAT CGG CCC GAC TAT CTC GAC 432  
220 Lys Gly Asp Arg Leu Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp  
221 290 295 300  
222  
223 TTT GCC GAG TCT GGG CAG GTC TAC TTT GGG ATC ATT GCC CTC TAG 477  
224 Phe Ala Glu Ser Gly Gln Val Tyr Phe Gly Ile Ile Ala Leu \*  
225 305 310 315  
226  
227  
228 (2) INFORMATION FOR SEQ ID NO: 4:  
229  
230 (i) SEQUENCE CHARACTERISTICS:  
231 (A) LENGTH: 158 amino acids  
232 (B) TYPE: amino acid  
233 (D) TOPOLOGY: linear  
234  
235 (ii) MOLECULE TYPE: protein  
236  
237 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:  
238  
239 Met Val Arg Ser Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His  
240 1 5 10 15  
241  
242 Val Val Ala Asn Pro Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg  
243 20 25 30  
244  
245 Arg Ala Asn Ala Leu Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln  
246 35 40 45  
247  
248 Leu Val Val Pro Ser Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu  
249 50 55 60  
250  
251 Phe Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu Leu  
252 65 70 75 80  
253  
254 Ile Ser Arg Ile Ala Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser  
255 85 90 95  
256  
257 Ala Ile Lys Ser Pro Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala  
258 100 105 110

PAGE: 1

**SEQUENCE VERIFICATION REPORT**  
PATENT APPLICATION **US/09/060,294**

DATE: 08/06/1999  
TIME: 11:54:16

***INPUT SET: S32807.raw***

Line

Error

Original Text

D.Romeo

1646

PAGE: 1

**RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/060,294**

DATE: 08/05/1999  
TIME: 15:22:31

*INPUT SET: S32807.raw*

**This Raw Listing contains the General Information Section and those Sequences containing ERRORS.**

**SEQUENCE LISTING**

(1) General Information:

**Does Not Comply  
Corrected Diskette Needed**

(i) APPLICANT: Martin Roland Jensen  
Soren Mouritsen  
Henrik Elsner  
Iben Dalum

10 (ii) TITLE OF INVENTION: Modified human TNF-alpha molecules, DNA  
11 encoding them, and vaccines containing said modified  
12 TNF-alpha or DNA

14 (iii) NUMBER OF SEQUENCES: 42

16 (iv) CORRESPONDENCE ADDRESS:

17 (A) ADDRESSEE: Farmaceutisk Laboratorium Ferring A/S  
18 (B) STREET: Indertoften 10  
19 (C) CITY: Vanloese  
20 (E) COUNTRY: Denmark  
21 (F) POSTAL CODE (ZIP): DK-2720

23 (v) COMPUTER READABLE FORM:

- (A) MEDIUM TYPE: Floppy disk
- (B) COMPUTER: IBM PC compatible
- (C) OPERATING SYSTEM: PC-DOS/MS-DOS
- (D) SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)

29 (vi) CURRENT APPLICATION DATA:

(A) APPLICATION NUMBER: 09/060,294  
(B) FILING DATE: 15-APR-1998

33 (vii) PRIOR APPLICATION DATA:

(A) APPLICATION NUMBER: 60/044,187  
(B) FILING DATE: 24-APR-1997

37 (viii) ATTORNEY/AGENT INFORMATION:

ATTORNEY/AGENT INFORMATION:  
(A) NAME: Price, D. Douglas  
(B) REGISTRATION NUMBER: 24,514  
(C) REFERENCE/DOCKET NUMBER: P60953US1

42 (ix) TELECOMMUNICATION INFORMATION:

(A) TELEPHONE: (202) 638-6666  
(B) TELEFAX: (202) 393-5350

INPUT SET: S32807.raw

**ERRORED SEQUENCES FOLLOW:**

228 (2) INFORMATION FOR SEQ ID NO: 4:  
229  
230 (i) SEQUENCE CHARACTERISTICS:  
231 (A) LENGTH: 158 amino acids  
232 (B) TYPE: amino acid  
233 (D) TOPOLOGY: linear  
234  
235 (ii) MOLECULE TYPE: protein  
236  
--> 237 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:  
238  
239 Met Val Arg Ser Ser Ser Arg Thr Pro Ser Asp Lys Pro Val Ala His  
240 1 5 10 15  
241  
242 Val Val Ala Asn Pro Gln Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg  
243 20 25 30  
244  
245 Arg Ala Asn Ala Leu Leu Ala Asn Gly Val Glu Leu Arg Asp Asn Gln  
246 35 40 45  
247  
248 Leu Val Val Pro Ser Glu Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu  
249 50 55 60  
250  
251 Phe Gln Tyr Ile Lys Ala Asn Ser Lys Phe Ile Gly Ile Thr Glu Leu  
252 65 70 75 80  
253  
254 Ile Ser Arg Ile Ala Val Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser  
255 85 90 95  
256  
257 Ala Ile Lys Ser Pro Cys Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala  
258 100 105 110  
259  
260 Lys Pro Trp Tyr Glu Pro Ile Tyr Leu Gly Val Phe Gln Leu Glu  
261 115 120 125  
262  
263 Lys Gly Asp Arg Leu Ser Ala Glu Ile Asn Arg Pro Asp Tyr Leu Asp  
264 130 135 140  
265  
266 Phe Ala Glu Ser Gly Gln Val Tyr Phe Gly Ile Ile Ala Leu  
267 145 150 155  
268  
269

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1514 (2) INFORMATION FOR SEQ ID NO: 31:  
1515  
1516 (i) SEQUENCE CHARACTERISTICS:  
--> 1517 (A) LENGTH: 99 amino-acids.

**RAW SEQUENCE LISTING  
PATENT APPLICATION US/09/060,294**

DATE: 08/05/1999  
TIME: 15:22:32

### **INPUT SET: S32807.raw**

1518 (B) TYPE: nucleic acid  
1519 (C) STRANDEDNESS: single  
1520 (D) TOPOLOGY: linear  
1521  
1522 (ii) MOLECULE TYPE: DNA (genomic)  
1523  
1524 (iii) HYPOTHETICAL: NO  
1525  
1526 (iv) ANTI-SENSE: NO  
1527  
1528 (vi) ORIGINAL SOURCE:  
1529 (A) ORGANISM: Homo sapiens  
1530  
1531 (ix) FEATURE:  
1532 (A) NAME/KEY: insertion\_seq  
1533 (B) LOCATION: 12..74  
1534 (C) IDENTIFICATION METHOD: experimental  
1535 (D) OTHER INFORMATION: /function= "Primer for PCR cloning  
1536 of DNA encoding TNF-alpha analog"  
1537 /evidence= EXPERIMENTAL  
1538 /organism= "Homo sapiens"  
1539 /standard\_name= "Primer "mut30-3""  
1540 /label= mut30-3  
1541 /note= "Primer "mut30-3" is a synthetically synthesised  
1542 100-mer oligonucleotide comprising DNA encoding human T  
1543 cell epitope P30 between stretches of DNA homologous to  
1544 stretches of the human TNF-alpha gene"  
1545  
1546 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:  
1547  
1548 CCCAGGTCTT CTTCAACAAAC TTTACCGTCT CCTTCTGGCT TCGGGTACCC  
1549 AAGGTCAGCG 60 \_\_\_\_\_ 60  
1550  
1551 CTAGGCCACCT CGAGGTCTCC TACCAGACCA AGGTCAACCT  
1552  
1553

PAGE: 1

**SEQUENCE VERIFICATION REPORT  
PATENT APPLICATION US/09/060,294**

DATE: 08/05/1999  
TIME: 15:22:32

**INPUT SET: S32807.raw**

Line	Error	Original Text
21	Unknown or Misplaced Identifier	(F) POSTAL CODE (ZIP): DK-2720
159	Stop Codon at end of sequence removed - no error	(2) INFORMATION FOR SEQ ID NO: 3:
237	Wrong or Missing Sequence Topology	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
270	Stop Codon at end of sequence removed - no error	(2) INFORMATION FOR SEQ ID NO: 5:
380	Stop Codon at end of sequence removed - no error	(2) INFORMATION FOR SEQ ID NO: 7:
490	Stop Codon at end of sequence removed - no error	(2) INFORMATION FOR SEQ ID NO: 9:
601	Stop Codon at end of sequence removed - no error	(2) INFORMATION FOR SEQ ID NO: 11:
711	Stop Codon at end of sequence removed - no error	(2) INFORMATION FOR SEQ ID NO: 13:
822	Stop Codon at end of sequence removed - no error	(2) INFORMATION FOR SEQ ID NO: 15:
933	Stop Codon at end of sequence removed - no error	(2) INFORMATION FOR SEQ ID NO: 17:
1043	Stop Codon at end of sequence removed - no error	(2) INFORMATION FOR SEQ ID NO: 19:
1153	Stop Codon at end of sequence removed - no error	(2) INFORMATION FOR SEQ ID NO: 21:
1517	Entered (100) and Calc. Seq. Length (50) differ	(A) LENGTH: 100 base pairs
1549	# of Sequences for line conflicts w/ running total	AAGGTCAGCG 60